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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,756	09/29/2006	Kazuyoshi Inoue	ITO-0003	4694
23599 7590 02/07/2011 MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201				
EXAMINER				
BAND, MICHAEL A				
ART UNIT		PAPER NUMBER		
1723				
NOTIFICATION DATE		DELIVERY MODE		
02/07/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@mwzb.com

**Advisory Action**  
**Before the Filing of an Appeal Brief**

**Application No.**

10/594,756

**Applicant(s)**

INOUE ET AL.

**Examiner**

MICHAEL BAND

**Art Unit**

1723

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 24 January 2011 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(g).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_  
Claim(s) objected to: \_\_\_\_\_  
Claim(s) rejected: 1, 2 and 4.  
Claim(s) withdrawn from consideration: 6-9

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

/Alexa D. Neckel/  
Supervisory Patent Examiner, Art Unit 1723

Continuation of 11. does NOT place the application in condition for allowance because:

Applicant has amended the status of withdrawn claims 6-9 to be 'withdrawn'; the objections are withdrawn.

On p. 4-6, the Applicant argues that there is support in para 0033 and 0062 for the expression  $[Ce+3]/([Ce+3]+[Ce+4])$  is 0.01 to 0.6.

The Examiner respectfully disagrees. Para 0033 states that the abundance of trivalent cerium is between 0.01 to 0.6, whereas para 0062 states that positive trivalent cerium using the expression  $[Ce+3]/([Ce+3]+[Ce+4])$  is 0.15, thus the expression relates to only positive trivalent cerium.

On p. 5, the Applicant argues that there is support for the range for  $[Ce]/([In]+[Ce]) = 0.005$  to 0.035 of cancelled claim 3 (now incorporated into claim 1) at para 0026-0028.

The Examiner respectfully disagrees. The Applicant's Specification at para 0026-0028 teaches the broadest range for  $[Ce]/([In]+[Ce]) = 0.005$  to 0.15, with preferable ranges being from 0.01 to 0.1 and 0.01 to 0.05, and clearly no support at the indicated paragraphs for the narrow range of 0.005 to 0.035. The Examiner is willing to consider support in Applicant's Figure for the range for  $[Ce]/([In]+[Ce]) = 0.012$  to 0.07 compiled from Examples 1-3.

On p. 6-7, the Applicant argues that the references fail to teach a particular ratio of trivalent and quadravalent cerium.

The Examiner respectfully disagrees and submits the following from the Final Rejection dated 8/5/2010:

'The combination of the references Fukuyoshi et al and Hosokawa et al teach a sputter target comprising a majority In<sub>2</sub>O<sub>3</sub> and a mixture of Ce<sub>2</sub>O<sub>3</sub> (trivalent) and CeO<sub>2</sub> (tetravalent). It is well known and inherent that CeO<sub>2</sub> is the most common and stable form, with the properties of redox chemistry involving concentrations of Ce<sup>4+</sup>/Ce<sup>3+</sup> dependent on the amount of oxygen present, as evidenced by Bhosale (Effective utilization of spray pyrolyzed CeO<sub>2</sub> as optically passive counter electrode for enhancing optical modulation of WO<sub>3</sub>, Introduction; www.webelements.com, cerium; www.wikipedia.com, cerium oxide referenced by Handbook of Inorganic Chemicals). Therefore the abundance of trivalent cerium present in the sputtering target is a result-effective variable dependent on the amount of oxygen present, with it being held that a particular parameter must first be recognized as a result-effective variable, i.e. a variable which achieves a recognized result, before determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. See MPEP 2144.05, Section II, Part B. Therefore one of ordinary skill would find it obvious that by varying the oxygen concentration results in different concentrations, including the claimed concentration, of trivalent cerium'.

On p. 7, the Applicant argues that there is no basis given for the calculated ratio of 0.05 from the prior art to have the same properties as the claimed range of 0.035.

The Examiner respectfully disagrees. The basis for the calculated ratio of 0.05 to be close enough to be expected to have the same properties of the claimed range 0.035 rests in the Applicant's Specification at para 0027 teaching a more preferable ratio is from 0.01 to 0.5. The Examiner also notes the current 112,1<sup>st</sup> rejection for lacking written support relating to this claim requirement.